

INDUSTRIAL HAZARDS CONTROL BULLETIN NO. 75

WARNING LABELS AND SIGNS

PART I

WARNING LABELS AND SIGNS FOR HAZARDOUS MATERIALS

Uses:

Warning labels will be used to accomplish the following:

1. Identify hazardous materials.
2. Warn employees of the properties of hazardous materials.
3. Inform employees of the precautions to be exercised in the use of hazardous materials.

NOTE: These labels are to be used for in-plant labeling of hazardous materials. They may also be used for labeling of materials delivered to a customer; however, they are not to be considered as a substitute for the DOT shipping labels. The labeling of radioactive materials is not included in the scope of this bulletin. See Industrial Hazards Control Bulletin No. 76.

Warning signs will be used to accomplish the following:

1. Identify hazardous materials used in process tanks or equipment.
2. Inform employees of areas where hazardous materials are used or stored.
3. Warn employees of the properties of hazardous materials/processes.

Responsibilities

1. Industrial Hygiene/Safety will:
 - a. Design warning labels to be used on all types of containers of hazardous materials and for the replacement of lost or defaced vendor labels in accordance with the following principles:
 - (1) The labels will be printed, stocked, and ordered from Stationery Distribution Center, Renton, Organization 4-8226, Mail Stop 61-66, 4.01 Building, Door 33, west side. Refer to D2-9114, "Chemical Warning Label Index" for ordering procedures.
 - (2) The format of the regular or preferred warning labels will include the name of the product, its flash point, if applicable, a signal word to designate the degree of hazard, a statement of the hazard, and the precautions to be followed. The product name, flash point, and appropriate Industrial Hazards Control Bulletin No. blanks will be filled in by the dispensing or using organizations. In the case of a mixture, the predominant or potentially more hazardous components shall be used to determine the text of the label.

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Responsibilities:

Labels for products containing a material classed as poisonous will include the word POISON plus the symbolic skull and cross-bones. Oxidizers and high explosives will be labeled with the special OXIDIZER and HIGH EXPLOSIVE labels, in addition to the regular warning label.

- (3) The signal words in order of diminishing severity of hazard will be as follows:

DANGER!
WARNING!
CAUTION!

- (4) Example of a label for a chemical:

DANGER! Carbon Disulfide (Bisulfide)

EXTREMELY FLAMMABLE - FLASH POINT Minus 22°F

EXTREMELY TOXIC IN ANY FORM

1. Do not get in eyes, on skin, or on clothing. Do not breathe vapor. Use only with adequate ventilation.
2. Keep away from heat, sparks, and open flame.
3. For detailed information, see Industrial Hazards Control Bulletin No. 19.
4. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, report to Medical.

- (5) Refer to D2-9114 for a complete listing of sample labels.

- b. Approve alternate methods of labeling hazardous materials when the use of the label types described in D2-9114 is impractical.
 - c. Publish, revise, and distribute D2-9114, "Chemical Warning Label Index" to provide data to all organizations requiring labeling information. This document contains proprietary information and shall not be released to persons not employed by The Boeing Company.
 - d. Assist in the development of signs for the posting of hazardous process tanks and equipment, rooms, and areas.
 - e. Approve all signs intended for use on hazardous process tanks and equipment, rooms, and areas.
2. The Safety and Fire Organizations will review the storage and handling methods for hazardous materials to insure that such methods are in accordance with accepted safety standards and standard fire prevention practices.

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Responsibilities:

3. Stores and Reclamation Organizations will:

- a. Verify that all new receipts of hazardous and extra-hazardous materials and compressed gas cylinders are labeled in accordance with their purchase orders.
- b. Place appropriate warning labels on all containers (immediate as well as outside container) which do not contain proper precautionary information. This includes compressed gas cylinders when a warning label is designated for the gas in Document D2-9114, "Chemical Warning Label Index".
- c. Place appropriate warning labels on all containers (immediate and outside) into which hazardous materials are dispensed. (NOTE: Include vendor's name with product designation.)
- d. Fill in the product name, coded chemical, flash point, and Industrial Hazards Control Bulletin blanks on the labels as required.
- e. Replace lost or defaced labels.
- f. Identify the contents of compressed gas cylinders by stencil or by decal when the vendor marking is defaced or illegible.
- g. Maintain approved storage areas and perform all storage requirements in accordance with the appropriate Industrial Hazards Control Bulletins, Safety, and Fire Organization directives.

4. Materiel

Operating Procedure 115-007, subject: "Purchasing of Hazardous Materials", defines the Materiel Organization's responsibility in regard to warning labels.

5. All Users of Hazardous Materials, will:

- a. Place appropriate warning labels on all containers (immediate as well as outside container) into which hazardous materials are dispensed from vendor containers. (NOTE: Include vendor's name with product designation.) Provide each safety container containing hazardous liquids with an appropriate label on the side of the container opposite the dispensing opening. Laboratory reagent bottles may be exempt from this requirement if their contents are properly identified.

NOTE: Any container which has been used to hold a hazardous substance must be properly cleaned prior to re-use unless the container is to be used for the same substance.

- b. Place appropriate warning labels on containers that are not properly labeled by the vendor when these containers have not been distributed through MRO Stores.
- c. Place appropriate DOT warning labels on outside containers, such as wooden or paper cartons, when a hazardous material is packaged for interplant transportation by Boeing vehicle. (Refer to Administrative Procedure 732.)

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Responsibilities:

5.
 - d. Place appropriate warning signs on all process tanks and equipment to identify their contents.
 - e. Post all rooms and areas where hazardous materials are used with an appropriate warning sign in accordance with legal/Safety and Industrial Hygiene requirements.
 - f. Fill in the product name, coded chemical, flash point, and Industrial Hazards Control Bulletin blanks on the label. Refer to the Chemical Warning Label Index, D2-9114.
 - g. Replace lost or defaced labels, as required.
 - h. Return unmarked or illegibly marked compressed gas cylinders to MRO Stores for proper marking.
 - i. Maintain approved storage areas and perform all storage requirements in accordance with appropriate Industrial Hazards Control Bulletins, Safety and Fire Unit directives.
6. Quality Assurance Material Test Laboratories will, in addition to the above responsibilities:
 - a. Determine the composition and flash point of materials when requested by Industrial Hygiene.
7. Engineering and Product Development Organizations, Materials and Processes Section will, in addition to the above responsibilities:
 - a. Notify Industrial Hygiene when a new potentially hazardous material is being considered for use and is not listed in D2-9114. (Include vendor's name, product name and number, and vendor's address, if available.)
 - b. Provide Industrial Hygiene with duplicate copies of information on the composition and flash point of materials.

PART II

GUIDE FOR PROPER LABELING OF CONTAINERS

1. The regular or preferred warning labels give the best coverage of the hazards and have first priority. They are to be used when possible. These labels are a series of tag labels and a similar series of gummed labels, size 4" x 2-1/2". Refer to the Chemical Warning Label Index, Document D2-9114, to determine the proper label for the material in question. Where feasible, it is recommended that a fiberglass (or similar) shell be placed over the tag warning label. This preserves the legibility of the warning labels which might otherwise be damaged by solvent spillage, etc.
2. The gummed labels for small containers (generally six ounces or less) are designated as JJJ for flammable materials and HHH for toxic materials (size 2" x 3/4"), except for materials defined as "poison" or "high explosive", or for specific substances (e.g., asbestos). The choice between the two can be made by choosing the most important statement of hazard from the regular label designated for the material.

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PART II

GUIDE FOR PROPER LABELING OF CONTAINERS (Continued)

3. Alternate methods of labeling may be utilized when the application and use of form labels is impractical. The following methods are acceptable.
 - a. A rubber stamp may be used to apply warning statements on product labels on containers of paints, thinners, solvents, resins, and hardeners that have been packaged by Boeing personnel for use in Boeing shops. Contact Industrial Hygiene for size and wording of these statements.
 - b. Warning statements may be used on the ditto master when product labels are prepared for application to small containers of materials that have been packaged for use in Boeing shops. The statements are to be the same as those on labels JJJ and HHH for flammable and toxic materials, respectively.
 - c. A plastic or metal tab may be attached to the neck of (pint) plastic squeeze bottles containing solvents used regularly in production shops. The tab shall be inscribed with the material's name or an acceptable abbreviation. In addition, the words "FLAMMABLE" or "TOXIC" shall be inscribed, as applicable, as well as the appropriate Industrial Hazards Control Bulletin reference and flash point, when applicable.
 - d. A printed label laminated between layers of medium density polyethylene may be used for clear solvents. The laminated label is rolled up to a diameter small enough to pass through the mouth of a polyethylene bottle; inside the bottle the label returns to its original shape.

The printed information on the labels must contain the following information:

1. Name of compound.
 2. Name of most hazardous chemical in compound.
 3. Flash point.
 4. Appropriate statements regarding toxicity, flammability, and precautionary measures.
4. When small containers of materials are fastened together in kit form, a warning label or statement for the most hazardous material in the kit shall be attached to one of the containers.
 5. Compressed gas cylinders shall be delivered by the vendor with either a decal or a stencil denoting the contents of the cylinder. If the cylinders are not so marked or if the marking becomes illegible, MRO Stores will identify and stencil the cylinders. The proper warning label, when designated in the Chemical Warning Label Index, Document D2-9114, will also be attached.

INDUSTRIAL HAZARDS CONTROL BULLETIN NO. 75 (Continued)

PART II

GUIDE FOR PROPER LABELING OF CONTAINERS (Continued)

6. Many hazardous material containers will be received from the vendors with proper precautionary information. If these materials are not repackaged, further labeling is not necessary.
7. Questions regarding the adequacy of warning labels should be referred to Industrial Hygiene.

PART III

GUIDE FOR POSTING OF PROCESS EQUIPMENT AND AREAS

1. Standard signs for identification of hazardous operations, control criteria, restricted areas, and signs for chemical solutions in open surface tanks shall conform with WAC 296-24-14011, entitled "Accident Prevention Tags", and FDD 2-154, Volume I, Section A-11.
2. Any questions on the adequacy of signs for the posting of process equipment or areas shall be referred to Industrial Hygiene or Safety.